

CLAIMS

1. An image capture and retrieval apparatus including:
an image sensor for capturing data relating to a visual image;
means for triggering the image sensor to capture the image data at a predetermined time and/or location;
a base station for retrieving and processing the image data; and
a moveable unit including data storage means for storing the image data and data transmission means for transmitting the image data, the moveable unit being adapted for conveying to the base station image data captured by the image sensor at a location remote from the base station.
2. Image capture and retrieval apparatus according to claim 1, wherein the moveable unit is able to convey data from a remote location at least 10m away from the base station.
3. Image capture and retrieval apparatus according to claim 1 or claim 2, wherein the image sensor forms part of the moveable unit.
4. Image capture and retrieval apparatus according to any of the preceding claims, wherein the moveable unit includes a light source for illuminating the image.
5. Image capture and retrieval apparatus according to claim 4, wherein the light source includes a flash unit.
6. Image capture and retrieval apparatus according to claim 4, wherein the light source includes one or more light emitting diodes.
7. Image capture and retrieval apparatus according to any of claims 4 to 6, wherein the apparatus includes a means for triggering the light source to provide illumination when the image sensor is triggered to capture the image data.

8. Image capture and retrieval apparatus according to any of the preceding claims, wherein the moveable unit includes a power source.
9. Image capture and retrieval apparatus according to claim 8, wherein the moveable unit includes a power controller for switching power on and off as required by the data storage means, the data transmission means, the image sensor and the light source.
10. Image capture and retrieval apparatus according to claim 8 or claim 9, wherein the moveable unit includes a motion detector for use in placing the power source in a low power state when the moveable unit is stationary and the data transmission means are not operating.
11. Image capture and retrieval apparatus according to any of the preceding claims, wherein the means for triggering the image sensor to capture the image data includes a radio receiver located on the moveable unit.
12. Image capture and retrieval apparatus according to any of the preceding claims, wherein the data transmission means includes a radio transmitter.
13. Image capture and retrieval apparatus according to claim 12, wherein the radio transmitter includes means for transmitting the image data in discrete blocks.
14. Image capture and retrieval apparatus according to any of the preceding claims, wherein the moveable unit includes means for removeably attaching it to a vehicle unit.
15. Image capture and retrieval apparatus according to claim 14, wherein the vehicle unit includes wheels or is adapted to travel on a track.
16. Image capture and retrieval apparatus according to claim 15, wherein the vehicle unit comprises, or forms part of, a car for a roller coaster or similar

amusement ride.

17. Image capture and retrieval apparatus according to any of the preceding claims, wherein the transmission means on the moveable unit includes means for transmitting information relating to the status of the moveable unit.

18. Image capture and retrieval apparatus according to claim 17, wherein such information includes battery charge state, number of images captured, and information relating to the status of the light source.

19. Image capture and retrieval apparatus according to any of the preceding claims, wherein the moveable unit includes a housing which is no more than 0.3 metres in height, 0.3 metres in width and 0.1 metres in depth.

20. Image capture and retrieval apparatus according to claim 19 wherein the housing is no more than 0.2 metres in height, 0.2 metres in width and 0.05 metres in depth.

21. Image capture and retrieval apparatus according to claim 19 or claim 20, wherein substantially all the components of the moveable unit are contained within the housing.

22. Image capture and retrieval apparatus according to any of the preceding claims, wherein the moveable unit weighs less than 1kg.

23. Image capture and retrieval apparatus according to any of claims 19 to 22, wherein the housing includes a front surface including two clear optical windows for the image sensor and the light source respectively.

24. Image capture and retrieval apparatus according to claim 23, wherein the windows are made of plastics material.

25. Image capture and retrieval apparatus according to any of claims 19 to

24, wherein the housing is waterproof.

26. Image capture and retrieval apparatus according to any of claims 19 to 25, wherein the housing is made of plastics material.

27. Image capture and retrieval apparatus according to any of claims 19 to 26 when dependent on any of claims 14 to 18, wherein the housing includes means for attaching it to the vehicle unit, for carrying the moveable unit.

28. Image capture and retrieval apparatus according to any of claims 19 to 27, wherein the housing includes means for attaching a battery charger thereto.

29. Image capture and retrieval apparatus according to any of the preceding claims, wherein the apparatus includes a plurality of moveable units each including any of the aforementioned features.

30. Image capture and retrieval apparatus according to claim 29, wherein each moveable unit is uniquely identified such that the base station may identify image data transmitted therefrom.

31. Image capture and retrieval apparatus according to any of the preceding claims, wherein the apparatus includes a track extending between the base unit and the remote location, defining a predetermined route for the moveable unit.

32. Image capture and retrieval apparatus according to claim 31, wherein the means for triggering the image sensor to capture the image data includes a stationary trigger unit located at a predetermined position on the predetermined route.

33. Image capture and retrieval apparatus according to claim 32, wherein the trigger unit includes a radio transmitter for providing a signal receivable by the radio receiver on the moveable unit.

34. Image capture and retrieval apparatus according to any of the preceding claims, wherein the base station includes interrogation means for causing the transmission of image data from a moveable unit.
35. Image capture and retrieval apparatus according to claim 34 when dependent any of claims 11 to 33, wherein the interrogation means includes means for providing a radio signal receivable by the radio receiver on the moveable unit.
36. Image capture and retrieval apparatus according to any of the preceding claims, wherein the base station includes processor means for converting the image data to RGB data for image display.
37. Image capture and retrieval apparatus according to any of the preceding claims, wherein the base station includes means for checking the image data for errors and triggering the transmission means on the moveable unit to re-transmit image data if required.
38. Image capture and retrieval apparatus according to any of claims 13 to 37, wherein the base station includes means for receiving image data transmitted in discrete blocks.
39. Image capture and retrieval apparatus according to claim 38, wherein the base station includes means for reconstructing an image from blocks of data received in any arbitrary order.
40. Image capture and retrieval apparatus according to claim 38 or claim 39, wherein each data block includes a sequence number.
41. A method for image capture and retrieval, the method including the steps of:
- triggering an image sensor to capture data relating to a visual image, at a predetermined location;

storing the image data and conveying the image data on a moveable unit to a base station remote from the predetermined location;
transmitting the image data to the base station; and
processing the image data at the base station.

42. A method according to claim 41, wherein the image sensor is conveyed with the moveable unit.

43. A method according to claim 41 or claim 42, wherein the moveable unit is conveyed on a vehicle unit, which includes wheels or runs on a track.

44. A method according to any of claims 41 to 43, wherein the method includes the step of triggering a light source to illuminate the image when the image sensor is triggered to capture the image data.

45. A method according to any of claims 41 to 44, wherein the image data is transmitted to the base unit via radio transmission.

46. A method according to claim 45, wherein the image data is transmitted in discrete blocks.

47. An image capture and retrieval apparatus substantially as hereinbefore described with reference to the accompanying drawings.

48. A method for image capture and retrieval substantially as hereinbefore described with reference to the accompanying drawings..

49. Any novel subject matter or combination including novel subject matter disclosed herein, whether or not within the scope of or relating to the same invention as any of the preceding claims.